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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/598,458

08/31/2006

Bernhard Wessling

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EXAMINER

NGUYEN, HAIDUNG D

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

10/07/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

efspatents@sbiplaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/598,458	<b>Applicant(s)</b> WESSLING ET AL.	
	<b>Examiner</b> Haidung D. Nguyen	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 and 25-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 17-24 and 33-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/25/06</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-13, 17-24 and 33-38, drawn to a composition.

Group II, claim(s) 14-16 and 25-32, drawn to a method for manufacture of a composition.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The composition of claim 1 is not novel. See Wessling et al (5,567,355) or Hsu et al (WO2004/029128). Therefore, there is not a special technical feature present which links the claims as defined by PCT Rule 13.2. Accordingly, Groups I and II are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

3. During a telephone conversation with Rosemary Kellogg on 9/17/09 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-13, 17-24 and 33-38. Affirmation of this election must be made by applicant in replying to

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this Office action. Claims 14-16 and 25-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. The examiner has required restriction between product and process claims.

Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the

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above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “ambient conditions” is vague and unclear as to the meaning of the technical features to which they refer. The Applicant should clarify what is to be understood by the term “ambient conditions”.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 7, 8, 11-13, 17- 20, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Wessling et al (5,567,355).

Regarding claim 1, Wessling et al discloses a composition capable of forming a coating and comprising a mixture of a conductive polymer in colloidal form (col 7, ln 26-34), carbon black (example 12) and a liquid dispersion medium (see examples).

Regarding claim 2, Wessling et al discloses a composition according to claim 1, wherein the conductive polymer is selected from the group consisting of polymers of anilines, thiophenes, pyrroles and substituted derivatives thereof (col 8, ln 43).

Regarding claim 3, Wessling et al discloses a composition according to claim 1, wherein two or more different conductive polymers are present (col 8, ln 28-53).

Regarding claim 7, Wessling et al discloses a composition according to claim 1, wherein the average particle size (number average) of the conductive polymer is smaller than 500 nm (col 7, ln 27-30).

Regarding claim 8, Wessling et al discloses a composition according to claim 1, wherein the conductivity of the conductive polymer is greater than  $10^{-5}$  S/cm (col 8, ln 63).

Regarding claim 11, Wessling et al discloses a composition according to claim 1, wherein the weight ratio of the conductive polymer to carbon black is in the range of from 1: 50 to 50:1 (example 12).

Regarding claim 12, Wessling et al discloses a composition according to claim 1, comprising a liquid dispersion medium in a concentration of from 40 to 99.5 weight percent, wherein the dispersion medium liquid is evaporable under ambient conditions, and other non-evaporable additives in a concentration of from 0 to 10 weight percent, the conductive polymer and carbon components

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being present in a concentration of from 0.5 to 60 weight percent, all weight percentages being based on the total composition (examples 1 and 12).

Regarding claim 13, Wessling et al discloses a composition according to claim 12, wherein the liquid dispersion medium comprises water and/or organic solvent(s) (Table 2 and col 11, ln 16-23).

Regarding claims 17 and 18, Wessling et al discloses a composite material comprising the composition according to 1 in the form of a coating on a substrate, wherein the substrate is selected from the group consisting of metals, semiconductors, plastics, ceramics and wood products (aluminum, example 17).

Regarding claims 19, 20, 33, and 34, Wessling et al discloses an electrical or electronic article comprising the composition according to claim 1 or 17, wherein the article is selected from the group consisting of conductors, energy stores, sensors, switches, condensers, capacitors and super-capacitors, double layer capacitors and redox-capacitors (col 14, ln 26-61).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 4-6, 9-10, 21-24, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wessling et al (5,567,355) in view of Watanabe et al (6,459,564).

Regarding claims 4-6, Wessling et al discloses a composition according to claim 1 as described above. Wessling et al does not specifically disclose the carbon black having a specific surface area.

Watanabe et al. discloses a composition comprising polyaniline and carbon black (col 4, ln 52-67). Watanabe et al further discloses the carbon black is activated carbon black having a specific surface of greater than  $750 \text{ m}^2/\text{g}$  (col 6, ln 6-7). The composition of Watanabe et al. is used to produce electrical double layer capacitors with a low leak current and no or little increase resistance and battery height after storage (col 7, ln 29-40; col 11, ln 4-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the carbon black having a specific surface of greater than  $750 \text{ m}^2/\text{g}$  as taught by Watanabe et al. in the composition taught by Wessling et al. to produce an electrical article (electrical double layer capacitor) with a low leak current and no or little increase resistance and battery height after storage (col 7, ln 29-40; col 11, ln 4-16).

Regarding claims 9 and 10, neither Wessling et al nor Watanabe et al disclose the composition's conductivity. However, the prior art teaches the identical chemical



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structure, the properties applicant discloses and/or claims are necessarily present. See *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655, (Fed. Cir. 1990). See also *In re Best*, 562 F.2d 1252, 195 USPQ 430, (CCPA 1977).

Regarding claims 21-24, 35 and 38 Wessling et al in view of Watanabe et al. disclose a capacitor comprising an electrolyte and a pair of electrodes with a separator disposed there between, wherein at least one of the electrodes comprises the composition according to claim 1 or 17 (Fig 1, abstract, col 4, ln 65-67).

### ***Examiner Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haidung D. Nguyen whose telephone number is (571)270-5455. The examiner can normally be reached on M-Th: 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harold Y Pyon/  
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Examiner - AU 1796